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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/517,256	03/02/2000	Vlado Ostovic	800448	4760

22844 7590 01/13/2003

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EXAMINER

WAKS, JOSEPH

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 01/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/517,256

Applicant(s)

OSTOVIC, VLADO

Examiner

Joseph Waks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35-54 is/are pending in the application.
- 4a) Of the above claim(s) 40, 45, 46, 49, 54 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35 and 41-44 is/are allowed.
- 6) ☒ Claim(s) 36-39, 47 and 48 is/are rejected.
- 7) ☒ Claim(s) 50-53 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 18. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Newly submitted **claims 40, 45, 46, 49 and 54** are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The method of applying the first current component through the stator winding to magnetically couple the stator to the rotor and the second current component to re-magnetize a portion of the magnet structure closest to the inner surface of the rotor is different and independent from originally claimed invention.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, **claims 40, 45, 46, 49 and 54** are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the at least one non-magnetic wedge disposed within each of the ferromagnetic pole segments as recited in claim 37 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claim 37** is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The feature of the at least one non-magnetic wedge disposed within each of the ferromagnetic pole segments is not shown in the drawings and not described in the specification.

5. **Claim 37** is also rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

For the reasons indicated above one skilled in the art would not be able to make and/or use the invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claim 36** is rejected under 35 U.S.C. 102(b) as being anticipated by **Burr (US 3,219,861)**.

Burr discloses in Figure 2 invention as claimed: a multi-pole rotor 14 comprising electromagnetic pole segments 15-22 extending between the inner and the outer rotor surface, slots separating the pole segments and extending between the inner and the outer rotor surface, wherein the slots have a width continuously varying along the direction from the inner to the outer rotor surface and a magnet structure 15a-22a having a width in the direction from the inner to the outer rotor surface.

8. **Claim 36** is rejected under 35 U.S.C. 102(b) as being anticipated by **Heidelberg et al.** (US 5,128,575).

Heidelberg et al. disclose in Figure 2 invention as claimed: a multi-pole rotor 2 comprising magnetically conductive pole segments 14 extending between the inner and the outer rotor surface, slots separating the pole segments and extending between the inner and the outer rotor surface, wherein the slots have a width varying in a stepwise manner along the direction from the inner to the outer rotor surface and a magnet structure 12 having a width varying in the direction from the inner to the outer rotor surface.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 37-39, 47, and 48** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Burr** (US 3,219,861) or **Heidelberg et al.** (US 5,128,575) in view of **McCarty et al.** (US 4,242,610).

Both, **Burr** and **Heidelberg et al.** disclose the electric machine essentially as claimed. However, neither **Burr** nor **Heidelberg et al.** disclose the non-magnetic wedge disposed within the ferromagnetic segments.

McCarty et al. disclose in Figure 3 the multi-pole rotor 10 provided with trapezoidal permanent magnets 22 and a non-magnetic structure 14 per pole for the purpose of supporting the magnets and magnetically separating the poles one from another, and the squirrel cage 34 for the purpose of electrical dampening of the flux harmonics caused by the stator.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the machine as taught by **Burr** or **Heidelberg et al.** and to provide non-magnetic structure per each of the rotor poles as taught by **McCarty et al.** for the purpose of supporting the magnets and magnetically separating the poles one from another as well as to provide the squirrel cage for the purpose of electrical dampening of the flux harmonics caused by the stator.

Double Patenting

11. **Claims 50-53** are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 41-46. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Allowable Subject Matter

12. **Claims 35, and 41-46** are allowed.

Re claim 35, the feature of the first slot portion extending entirely from the inner to the outer surface of the rotor and a second slot portion extending from the outer surface of the rotor but not entirely to the inner surface of the rotor and the magnet structure arranged in each of the slots and comprising a first permanent magnet of a rectangular cross-section disposed in the first slot and at least second permanent magnet of a rectangular cross-section disposed in the second slot, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Re claims 41-46 and 50-53, the feature of the magnetic field generating means disposed within or in proximity of the iron pole segments to minimize the effects of armature reaction attributable to the stator, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Response to Arguments

13. Applicant's arguments with respect to claims 35-55 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Prior Art

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Communication

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (703) 308-1676. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.


JOSEPH WAKS
PRIMARY PATENT EXAMINER
TC-2800

JW
January 9, 2003